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**Standard
Form 298
(Rev.
8-98)**
Prescribed
by ANSI
Std
Z39-18

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Blind Adaptive Dereverberation of Speech Signals Using a Microphone Array

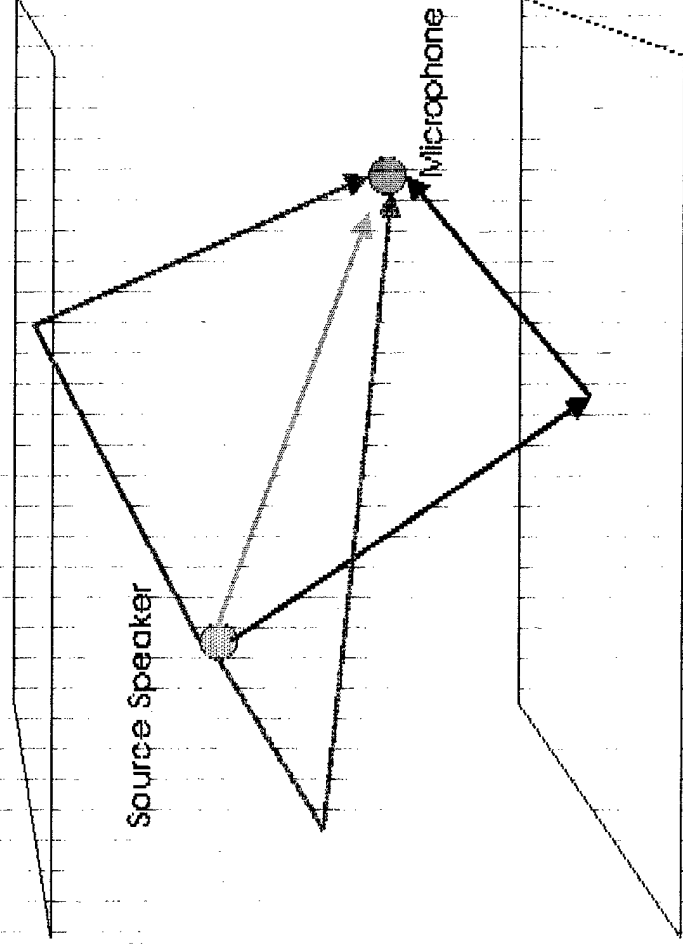
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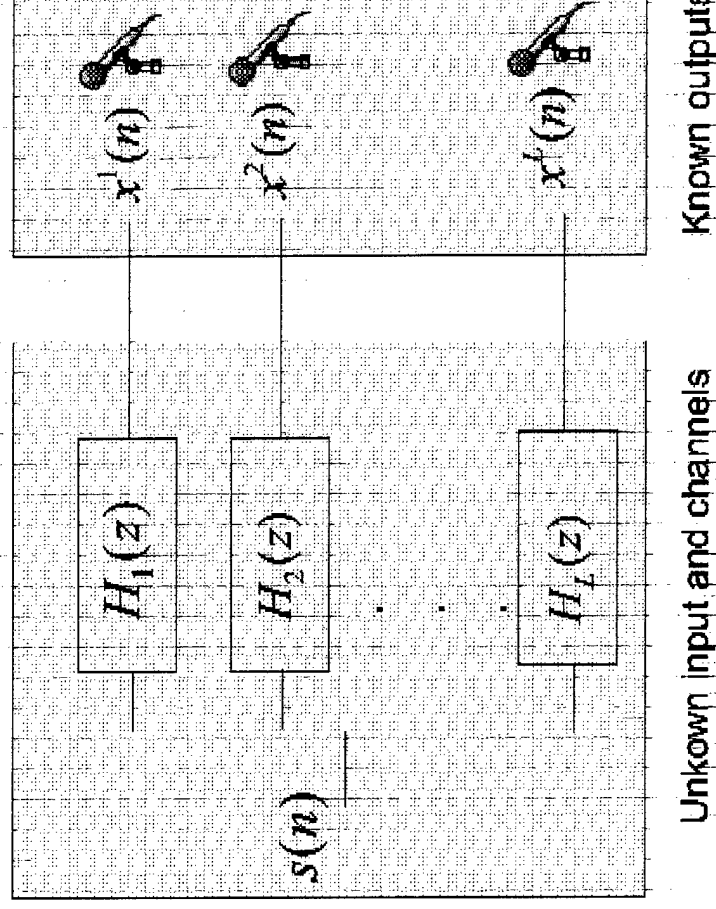
Problem Description

- Reverberation of speech signals in a closed room due to multipath signal propagation.



SIMO System Formulation

- Multiple microphones create the equivalent of multiple channels.

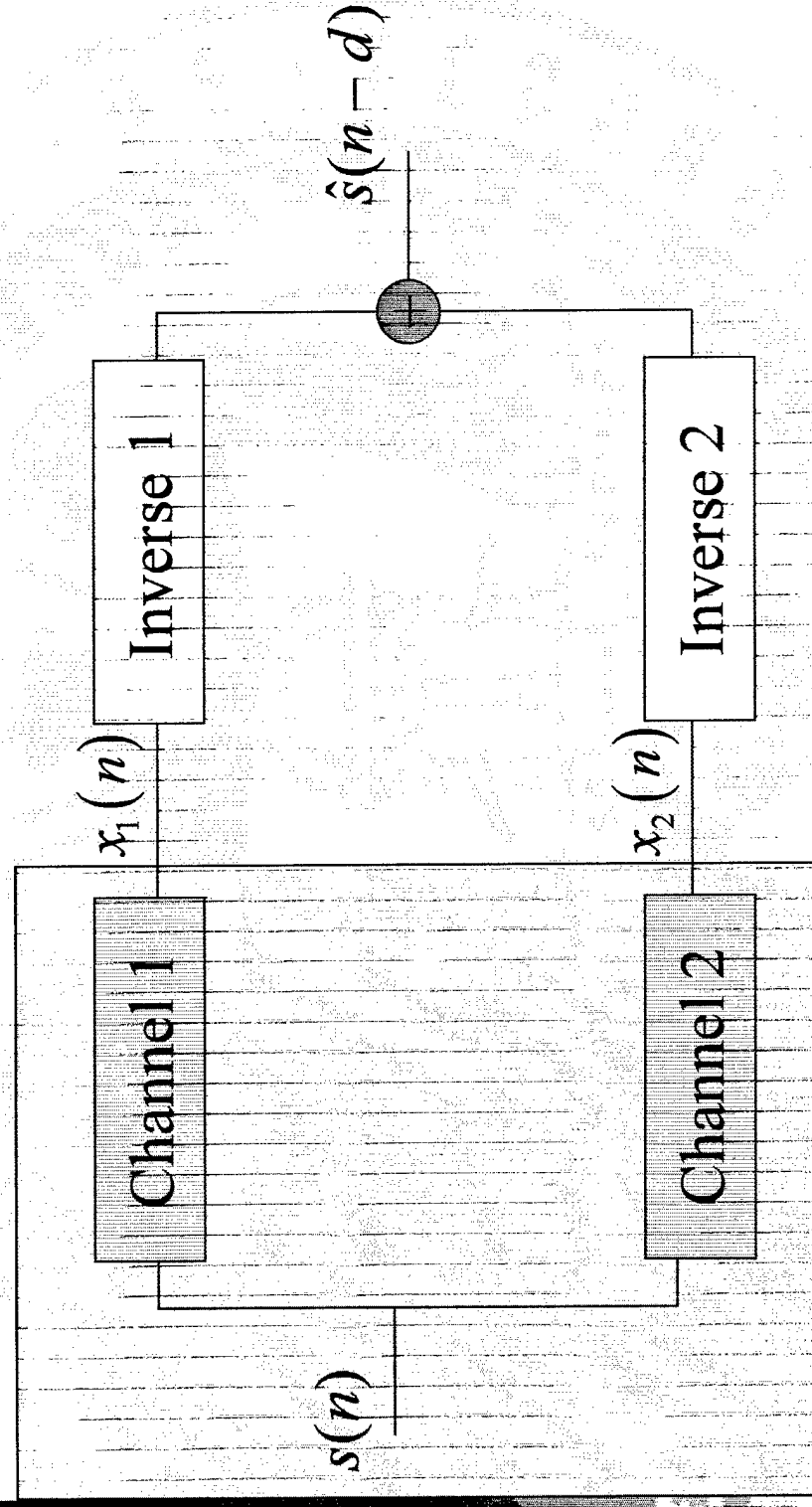


Dereverberation Approach

- Dereverberation accomplished by finding inverse filters for the channels.
- Use a reduced mutually referenced equalizers criterion to find inverses.
- Utilize second-order statistics of the reverberated speech signals.
- Speaker location and microphone locations not known a-priori.



Dereverberation System Diagram



**Unknown input and
channels**